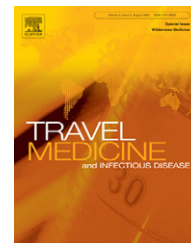




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REVIEW

Travelling to China for the Beijing 2008 Olympic and Paralympic Games

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Summary

The 29th modern Olympic Summer Games, conducted once every 4 years since 1896, will be held in Beijing, China, from 8 to 24 August 2008. There will be approximately 28 major and 302 minor events in 37 venues in the prominent cities of Beijing, Hong Kong and Shanghai, and also in Qingdao (a coastal town in Shandong Province), Qinhuangdao (northeast of Beijing), Shanghai, Shenyang (an industrial city in Liaoning Province) and in Tianjin (on the coast near Beijing). Following the Olympic Games, the Paralympic Games will be conducted from 6 to 17 September 2008 in Beijing and 20 Paralympic Sports will be represented. This paper focuses on health and safety issues for travellers to China in general, although it makes specific references to advice for visiting Olympic and Paralympic athletes and team staff, who will be travelling to the games. It must be remembered that travel health advice can change, and that travellers should be advised to seek up-to-date travel health advice for China closer to their departure.

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Introduction

The 29th modern Olympic Summer Games, conducted once every 4 years since 1896, will be held in Beijing, China, from 8 to 24 August 2008. There will be approximately 28 major and 302 minor events in 37 venues in the prominent cities of Beijing, Hong Kong and Shanghai, and also in Qingdao

(a coastal town in Shandong Province), Qinhuangdao (northeast of Beijing), Shanghai, Shenyang (an industrial city in Liaoning Province) and in Tianjin (on the coast near Beijing).

The Beijing Games in Beijing will play host to the 28 summer sports currently on the Olympic program. Approximately 10,500 athletes are expected to participate in the

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Games, with around 20,000 accredited media bringing the games to the world, and up to several 100,000 spectators at any one time.¹ Following the Olympic Games, the Paralympic Games will be conducted from 6 to 17 September 2008 in Beijing and 20 Paralympic Sports will be represented.

This paper focuses on relevant health and safety issues for travellers in general, although much is relevant for athletes and team staff, who will be travelling to the games. As travel health advice can change depending on circumstances, such as environment, disease and politics, travellers need to be advised that they will need to update themselves in the month before they travel to China.

Pre-travel planning

Optimum athlete performance can be influenced by the advent of injury or illness, before, during or after an event. This pre-competition preparation can easily be undone if all aspects of training for any event as big as the Olympics have not been considered. This includes pre-travel health issues^{2,3} that could affect preparation and performance. Although most Olympic and Paralympic teams need to have their own medical plans for deployment to the Beijing Olympics and Paralympics, it is still important that travel health advisers are prepared to discuss preventative health issues with all officials and athletes travelling to the games. This is especially valid for those who may be challenged physically or those who are late replacements at the games. An excellent review for the travelling athlete has been published elsewhere,⁴ although it should be borne in mind that this was specifically written for the 1998 Commonwealth Games in Kuala Lumpur, Malaysia. The areas which may need to be check-listed include personal health issues, such as those of a dental and sexual health nature, coping with acclimatisation and jetlag, coping with culture shock and managing personal stresses due to the altered environment, immunisations, jetlag, diet, medical kits, and other general travel health issues and female health issues. Dietary advice for travellers, including travelling athletes, has been discussed elsewhere.⁵

Safety and security issues in Beijing

Whilst the overall safety and security threat to those at the Olympics and Paralympics is low, and the threat of terrorism minimal, travellers are nevertheless advised to be alert to their own safety measures. It is important to assess developments that might affect personal wellbeing, and travellers should seek local advice before venturing out, particularly late at night. Petty crimes, such as pick-pocketing and mobile phone theft, may be prevalent and travellers should be vigilant in all crowded locations, including Olympic and Paralympic venues, tourist sites, restaurants, coffee shops, Internet cafés, markets and department stores.

As there will be a large influx of visitors over the period of the games, they will need to be advised to take usual common sense precautions. For example: travelling with

others at night-time so that potential “muggings” and other spontaneous crimes around central Beijing and other centres are minimised. “Muggings abroad” has been discussed elsewhere.⁶

Although violent crimes against foreigners are thought to be rare in China compared to other major world cities, isolated acts of violence have occurred, particularly in the popular expatriate bar districts of Beijing and Shanghai. Other attacks have occurred on occasion: for example, in 2002 there was a spate of attacks in which victims were attacked randomly by people wielding needles full of “blood”, which later turned out to be red food dye.⁷

Road safety in China

Road safety is an important issue in China, where 380,000 traffic accidents occurred in 2006, resulting in 90,000 road traffic deaths—making it one of the highest rates in the world.⁷ Over this year, there were reported to be 130 million violations of traffic rules⁸ in a country where left-hand-drive vehicles drive on the right side of the road. Pedestrians are urged to exercise special caution when crossing streets in China’s cities as they do not have the right-of-way.

Driving etiquette in China is in its infancy and as a result traffic can be chaotic, with road courtesies often being ignored. Travellers need note that cars and buses in the wrong lanes frequently hit pedestrians and bicyclists. Drivers may disregard traffic signals and proceed on red, particularly at T-intersections. This was not illegal until the 2003 promulgation of the Road Traffic Safety Law of the People’s Republic of China, which constitutes China’s first ever law on road traffic, and was designed to address the alarmingly high rates of accidents.⁹ Pedestrians should always be careful while walking near traffic. Most traffic accident injuries involve pedestrians or cyclists who are involved in collisions or who encounter unexpected road hazards, e.g. unmarked open manholes.¹⁰

Those hiring cars should ensure that they are roadworthy and have basic safety equipment, such as seat belts, which should be worn, and in addition motor vehicles should be checked for special safety items such as airbags and first aid kits. Safety seats for infants and children are not widely available in China and, if travelling by taxi, it should be noted that many taxi-cabs do not have functioning seatbelts for passengers.

Random breath testing takes place in most parts of China, with fines for drunk driving or immediate detention being possible penalties. Speed limits for most of China, which will be sign-posted, are around 100–110 km/h on open roads with lower limits of around 40–60 km/h in cities, towns and school zones. Travellers will need to familiarise themselves with the local road rules with the hire car company, automobile association or other official source. Those going to rural and remote China will need to seek local advice concerning such trips, ensuring that they inform a reliable agency or person of their movements. In addition, they also need to be aware that road traffic signs may be written exclusively in Chinese characters, especially outside of major centres.

All drivers should be aware of the Chinese regulations regarding traffic accidents.^{9,10}

- Drivers should not move their vehicles or disturb the scene of the accident, and this includes even moving the car to the side of the road, unless and until ordered to by the traffic police.
- Summon the traffic police and wait at the scene until the police arrive and complete their investigation.

Once the police arrive, they will complete a preliminary investigation and arrange a time for the driver to report to the police station responsible for the accident scene. The police will prepare a written report, in Chinese, and describe the circumstances of the accident. They will present the report for signature, verifying the details of the accident. Travellers are advised not to sign the report unless the document is translated and it is found totally accurate. If it is believed to be partly or wholly inaccurate, traveller-drivers are advised to:

- write a disclaimer on the report noting a lack of understanding of it and inability to attest to the accuracy thereof, and stating that they are signing it because it is a police requirement, or
- write their own version of the accident, in English, on the police form and indicate that their signature only attests to the accuracy of the English version.

Those involved at an accident should not leave the scene of an accident, as this may serve to further incite any gathering crowd if they perceive that a traveller-driver is fleeing to evade responsibility for blame or payment of damages. The crowd may attempt to keep vehicles at the accident scene by standing in the way or blocking the roadway with vehicles, bicycles and other objects. There is a long-standing belief in China that the larger vehicle involved in an accident is at fault. Hence, if a motorist hits a cyclist, the motorist is assumed to be at fault. This view has been reinforced by the Road Traffic Safety Laws.⁹

The games sites

Beijing

There are 31 games sites throughout Beijing.¹ Of particular note is the Shunyi Olympic Rowing-Canoeing Park in a new area called Mapo Village. It has close proximity to the expatriate community, near agricultural land and farms.⁸

The main Olympic Games venue at 'Olympic Green' in northern Beijing is spread over a large area. Travellers should be prepared to walk some distances around the venue. Travellers with disabilities will need to ensure that special arrangements have been made to assist them. An awareness of evacuation routes and fire safety at the games village or other places where spectators or athletes are residing is essential. Many different cultures will be represented at the games and travellers will need to be

culturally aware and sensitive, especially around the Games Village.

Outside Beijing

Olympic competition venues outside Beijing are at the cities of Qingdao (sailing), Hong Kong (Equestrian), Tianjin (Football), Shanghai (Football) and Qinhuangdao (Football).

Health issues at the games

Climate

All the venues are effectively at sea level, with Beijing being highest at 51m above sea level. In August, the humidity will be highest in Hong Kong and Shanghai (approximately 80%) and lowest in Qinhuangdao (approximately 65%). Average daily maximum temperatures are likely to be in the range of 25–32 °C in all venues, although northern China may experience heat waves with temperatures exceeding 40 °C. Thus, it is essential that adequate precautions are taken to prevent sunburn and dehydration and travellers and games competitors should probably be advised to limit their exercising to the early morning or late afternoon periods.

Travellers' diarrhoea

All travellers to China are at significant risk of travellers' diarrhoea. Therefore, all travellers are advised to ensure strict food and water hygiene, discussed elsewhere.¹¹ Except in Hong Kong, where tap water meets international standards, all local water in other parts of China needs to be considered contaminated unless bottled or sterilised in some form. Milk products should be avoided unless they are pasteurised or they are proprietary products, which are usually adequate for consumption. All meat, poultry and seafood needs to be cooked well, not raw, and served whilst hot. Vegetable also should be well cooked and served hot. Salads and mayonnaise are best avoided.

There have been outbreaks of other specific food-borne illness, such as eosinophilic meningitis due to *Angiostrongylus cantonensis*, notably in Beijing in 2005, when there were 152 cases attributed to eating undercooked Amazonian snails in several different restaurants.¹² Occasional cases of brucellosis have also occurred and can be related to ingestion of unpasteurised dairy products or direct contact with ruminant animals.

If travellers' diarrhoea occurs, travellers should maintain a high intake of non-alcoholic fluids and avoid dairy products. Diarrhoea not responding to treatment with an antibiotic, or chronic diarrhoea, may be due to a parasitic disease such as giardiasis, amoebiasis or cryptosporidiosis, and needs further investigation by a medical authority. In general, travellers are advised to act on the adage: "Cook it, Boil it, Peel it, or Avoid it".

Air pollution

Although it is many months before the 2008 Olympic and Paralympic Games, Beijing has to fend off an unwelcome award: the air pollution capital of the world. Satellite data reveals Beijing and the neighbouring northeast Chinese provinces have the planet's worst levels of nitrogen dioxide, a gas that can cause considerable pulmonary morbidity.¹³

Alarm about the perilous state of the environment has gathered pace in recent years. China is the world's second-largest producer of greenhouse gases, and pollutants in the sky over China have increased by about 50% during the past 10 years. More than 100 million people live in cities, such as Beijing, where the air is considered "very dangerous". China is now the largest source of sulphur dioxide (SO₂) emissions in the world.¹⁴ SO₂ and particulate matter caused by coal combustion are two major air pollutants, resulting in the formation of acid rain, which now falls on about 30% of China's total land area. Industrial boilers and furnaces consume almost half of China's coal and are the largest single point sources of urban air pollution.

In an effort to reduce air pollution in Beijing, the municipal government in 1999 ordered city vehicles to convert to liquefied petroleum gas and natural gas. By 2002, Beijing had the largest fleet of natural gas buses in the world—a total of 1630 vehicles. China's national legislature, through its model of "Cleaner Production" and other attempts to reduce air pollution, has significantly altered the Law on the Prevention and Control of Air Pollution, which was revised in 2002.

Nonetheless, Beijing continues to have a significant air pollution problem. In 2005, the European Space Agency released data suggesting that Beijing and its environs may suffer some of the worst air pollution on the planet.¹⁵ The fact that Beijing's air quality has failed to improve despite the many measures outlined above, is partly a reflection of rapid economic development and increased motor vehicle use, and may also be due to a large contribution of regional air pollution and meteorological factors.¹⁶ However, the Central and Municipal Governments are strongly committed to ensuring that the Olympic and Paralympic Games are not marred by poor air quality. It is anticipated that every possible measure to curb air pollution will be taken; such measures may include closing factories, limiting road traffic, strict measures (even if temporary) to curb regional pollution and artificial weather modification.

Malaria

None of the games venues are in areas requiring malarial prophylaxis. There have been concerns about the relatively limited outbreaks of vivax malaria in China, but these have been in central provinces such as Anhui, far from the Olympic venues. The "hotspots" for falciparum malaria are said to be only southwest Yunnan province, and Hainan Island, again far from any Olympic and Paralympic venues.^{17,18}

If travellers are planning side trips to other countries in the region, they need to advise their travel health professional as soon as possible. Where needed, travellers must be advised to adhere to appropriate malaria chemoprophylaxis and careful personal protective measures. Travellers should be advised that, if they come from or a passing through a malarious area on their way to Beijing, they should seek medical advice, if they become ill, and indicate that they have come from an area where malaria may be present.

Vaccine preventable disease

Travellers to China will need to ensure that their routine immunisations are up to date. Whilst there are no specific vaccinations required for travel to China (a summary of recommended vaccinations is listed in Table 1), the following should be discussed and offered to all travellers and competitors to the games, particularly if they are travelling to other less developed countries in the region.

Food and water borne disease

Hepatitis A vaccine is very important in China and all travellers should either determine positive serology to the disease or have the vaccine. Typhoid fever is more an issue in southern China rather than in the north, and is actually quite uncommon in Beijing. Whilst it is recommended for travellers to developing countries in the region,¹⁹ vaccination against typhoid is advisable for groups of travellers to China, during the period of the Olympics and Paralympics, primarily as a public health measure.

Hepatitis B

Athletes in particular contact sports, such as boxing, should be strongly advised to be vaccinated against hepatitis B virus. Approximately 10% of the population in China are chronic carriers of Hepatitis B²⁰ with well over 100,000 incident cases reported each month to the Chinese Center for Disease Control and Prevention (CCDC) and thus risk of infection for travellers and competitors at the games is high.²¹

Influenza

Influenza is highly seasonal and in Beijing the epidemic season ranges from October to March and peak season runs from mid-November to late January. The influenza vaccine is especially recommended for: travellers over age 50, those aged 6 months to 5 years, and those with chronic disease or a weakened immune system.

Japanese B encephalitis (JE)

JE is a mosquito-borne disease, which is present in all regions, except in Qinghai Province, Xinjiang Province and Tibet (Xizang). Risk of JE is greatest in rural pig-breeding agricultural areas of the central and eastern provinces,

Table 1 Rapid guide to vaccine preventable diseases in China.

Cholera	Immunisation is neither required nor routinely recommended.
Diphtheria	An initial childhood series of vaccinations as per individual country recommendations is advised, and then travellers are recommended to have the vaccine 10 yearly especially if travelling to developing countries, or where there may be a risk of contracting the disease.
Hepatitis 'A'	Immunisation is strongly recommended but not compulsory.
Hepatitis 'B'	Immunisation is recommended for travellers who will be in the area for 1 month or more and/or anyone who might be exposed to blood or body fluids, have sexual contact with the local population, or be exposed through medical equipment, acupuncture, tattoos, manicures, pedicures etc. Transmission of Hepatitis B is through sex or contact with contaminated blood, needles and syringes.
JAP.B. encephalitis	Immunisation is recommended for travellers who will be travelling extensively in rural areas, or in areas where there is a known outbreak of Japanese encephalitis.
Meningococcus	Immunisation is optional for travellers. If given, a bivalent (A+C) or quadrivalent (ACWY) vaccine should be administered.
Measles, mumps, rubella	Immunisation recommended for all travellers unless: (1) they have documented administration of two doses of live measles vaccine or (2) they have laboratory evidence of immunity or (3) they were born before measles vaccination was instituted in their country of origin or (4) they have documentation of physician-diagnosed measles.
Polio	Immunisation is neither required nor routinely recommended for those attending the Beijing Olympic Games Venue regions.
Rabies	Immunisation is recommended for travellers who will have extensive outdoor exposure in rural areas, such as camping, hiking or bicycling, and for those who remain long-term in China (longer than 1 month)
Tuberculosis (TB)	Immunisation is not compulsory, and is not routinely recommended for travellers to China. Recommendations about routine vaccination vary from country to country.

Table 1. (continued)

	A skin test is available if immunity or exposure status is in doubt, and this is recommended pre- and post-travel for those going to 'at risk' regions.
Tetanus	An initial childhood series of vaccinations as per individual country recommendations is advised, and then travellers are recommended to have the vaccine 10 yearly especially if travelling to developing countries, or where there may be a risk of contracting the disease.
Typhoid fever	Immunisation is recommended.
Yellow fever	A yellow fever vaccination certificate is required from travellers coming from infected areas, otherwise immunisation is not required

especially during the warm, rainy months from May to September; whilst risk of JE is year-round in the tropical southern provinces. There is a lower risk of transmission in urban areas due to the relative absence of reservoir hosts such as pigs and water birds. Nevertheless, this is likely to be an important issue for those attending the Shunyi Olympic Rowing-Canoeing Park,⁸ an area near to agricultural land and pig farms where mosquitoes remain a serious issue and Japanese encephalitis has occasionally occurred in the resident expatriate population. Whilst the overall risk of contracting the disease is low, sporadic cases do occur in travellers; particularly those travelling more extensively in China, remembering that occasional cases have also been reported in urban travellers within the country.²² Visitors travelling more extensively in China, and those who will be staying in the Shunyi residential areas should consider vaccination.

Meningitis

Meningococcal disease is prevalent in China. According to CCDC, meningococcal disease is the sixth most important infectious disease cause of death in China, after rabies, tuberculosis, viral hepatitis, AIDS and neonatal tetanus.²¹ Historically meningococcal outbreaks in China have been primarily due to serotype A; however, recently several outbreaks of serotype C disease have been reported from many provinces.^{23,24} Although there are no official recommendations about meningococcal vaccination for travel to China, the Olympic and Paralympic venues may provide a possible opportunity for spread of meningococcal disease and some travellers may therefore wish to consider vaccination with a bivalent (A+C) or quadrivalent (ACWY) vaccine.

Measles and rubella

Up to date measles and rubella vaccination are also very important for travel to China. China continues to

report 10,000–20,000 cases of measles per month. Rubella vaccination is not part of the routine immunisation schedule in China and the disease is reported at a rate of approximately 2000–4000 cases per month.²⁵ However, the figures are unreliable due to significant under- and over-reporting; overall it is believed that only 20–30% of actual measles cases are reported.²⁶ Recent cases of measles among travellers returning from China highlight the need to ensure adequate vaccination.²⁷ All travellers should be advised to have an measles–mumps–rubella (MMR) booster vaccine unless (a) they were born before the vaccination was instigated in their country of origin, (b) they have had two documented doses of live measles vaccine, (c) they have laboratory evidence of immunity or (d) they have had physician confirmed clinical measles.

Rabies

Rabies in China is currently an important issue⁸ with an incidence second only to India. In 2006, 3200 rabies cases were reported in the country, with a further 140,000 people in Beijing reporting animal bites. In the year ending May 2007, rabies was the number one reported cause of death due to infectious diseases in China. Hong Kong is considered “rabies free”. All other areas of China, including Beijing, have endemic rabies although the intensity does vary from place to place.²⁹

Imported, international standard Human Rabies Immuno-globulin (HRIG) is not available in China for post-exposure treatment, except in Hong Kong, hence any mammal bite or scratch is an immediate ‘trip-ender’ if the bitten person has not had pre-exposure vaccination. Even domestic dogs cannot be guaranteed safe, as only 3% of them are properly vaccinated in China²⁸ and even in those that are vaccinated the quality of the vaccines they have received can often not be accurately determined. In addition, some strains of rabies in China are highly virulent, with reports of latency between extremity bites and encephalitis as short as 10 days. Hence, a low threshold for rabies vaccination should be maintained for travellers to China.

Travellers who are likely to be in any region, or indeed any situation, where there is a risk of exposure to the disease should consider pre-exposure rabies vaccination. Unlike HRIG, joint-venture rabies vaccine is available in China from reputable international clinics for the two post-exposure doses. All travellers should be educated about:

- the risks,
- what to do if they do sustain a bite,
- the need for special vigilance in children who may not report minor injuries and
- the possible need for evacuation to Hong Kong or home for post-exposure treatment, if they sustain a bite or scratch and do not have the pre-exposure vaccine.

Tetanus

All travellers should also have an up-to-date tetanus booster. It is preferable to avoid the need for a booster

while in China, as the vaccines used may be unfamiliar, and the traveller is unlikely to be able to read the package to confirm what they are being given or, in some cases (especially outside of major centres) be certain of having a sterilised needle used.

Yellow fever

Travellers going to or returning from yellow fever endemic areas of Africa, America and other countries to China need a certificate of vaccination or prophylaxis against yellow fever, and this should be obtained prior to departure.¹³

Travellers’ pharmaceuticals

Athletes and travellers to China need advice on what drugs of pharmaceuticals are illegal to take into the country. Travellers who need medication are advised to take enough from their own country, preferably double the amount divided into two caches in case one gets lost, for the duration of their travel to China.

It is advised that all medications taken into China should be covered by a doctor’s letter, with a copy of the original prescription. They should be kept in their original containers, in case they are asked for by officials when entering the country.

Athletes are likely to undergo random testing for performance-enhancing and other drugs during the games. If athletes seek medical advice in China for any reason, they need to advise clinic staff that they are athletes, as non-essential medications, including some pain killers, may be banned substances. Athletes who are placed on any prescribed medication may be required to notify appropriate drug testing authorities.

Seasonal and specific disease information

AIDS/HIV

In 2005, WHO estimated that there were about 650,000 HIV/AIDS infections in China, of which 75,000 have developed AIDS.²⁹ There are around 288,000 drug users living with HIV/AIDS accounting for 44.3% of the total number of estimated HIV cases. Nearly half (45.5%) of injection drug users are sharing needles and syringes. Thus, an extremely high risk of catching the disease via injection drug use is ensured.

As the disease is spread from the exchange of body fluids, all travellers and competitors at the games are recommended to be extremely cautious about any risk of exposure to the disease from accidents or dental surgery, sexual transmission, blood exposure (such as from unsterile needles and syringes) as well as from unscreened blood transfusions.

Persons discovered to be carrying drugs for HIV treatment (antiretrovirals) may not be allowed entry. Also, narcotic-containing drugs, legally prescribed for personal use, may be prohibited. It is suggested that customs clearance for the

drugs, from the country of origin, be obtained before travel to China.

Avian influenza

Since December 2003, there have been instances of 'avian flu' amongst poultry in South East Asia. While it is unusual for humans to get influenza virus infections directly from poultry or birds, there have been 25 human cases of the disease with 16 deaths in China.³⁰ Travellers are thus advised to avoid places such as poultry farms and bird markets where live poultry are raised or kept, and to avoid contact with sick or dead poultry. WHO continues to recommend that travellers to affected areas should avoid contact with live animal markets and poultry farms, and any free-ranging or caged poultry. Large amounts of the virus are known to be excreted in the droppings from infected birds.

Dengue fever

Dengue is uncommon in China, but sporadic outbreaks have occurred during the summer months in some southern provinces.³¹ Protective measures against mosquito bites should be taken.

Helminthic diseases

Helminthic diseases are moderately to highly endemic in rural and urban areas. Diseases caused by soil-transmitted helminths (hookworm disease, strongyloidiasis) can be prevented by wearing shoes and not walking barefoot outside. Food-transmitted roundworm infections (ascariasis, trichuriasis and trichinosis) can be prevented by washing salads and/or vegetables or thoroughly cooking food to destroy infective eggs. Lung fluke and liver fluke disease (paragonimiasis and clonorchiasis) can be prevented by not eating raw freshwater crabs, crayfish or fish. Fasciolopsiasis (large intestinal fluke disease) can be prevented by not eating undercooked or raw water plants, such as watercress and other aquatic vegetables. Anisakiasis can be avoided by not eating raw saltwater fish, including raw octopus and squid; capillariasis can be prevented by avoiding raw or undercooked freshwater fish.

Hepatitis E

China is endemic for hepatitis E, which is transmitted enterically by contaminated drinking water or raw or undercooked shellfish. It is thought to account for up to 33% of acute hepatitis in the Beijing area³² and seroprevalence studies suggest that 18–60% of rural residents of south China have been exposed.³³ Like hepatitis A, hepatitis E does not become chronic; however, it can be severe or fulminant especially during late pregnancy (with a 10–30% mortality rate). Hence, travellers need to be aware that even with hepatitis A vaccination, they must take precautions against enteric hepatitis infection. There is no vaccine against hepatitis E.

Tuberculosis

Tuberculosis is common in all developing countries and China is no exception. To become infected, a person usually has to spend a long period of time in a closed environment with a coughing, untreated person with active tuberculosis. Hence, the risk to travellers over the Olympic Games season is low. Immunisation against the disease is not universally recommended.

Other less common diseases

Cholera, echinococcal disease, filariasis, leishmaniasis, leptospirosis, leprosy, Lyme disease, plague and schistosomiasis do occur in China but are rare in travellers. Scrub typhus is reported in south China, particularly in hikers or those visiting rural areas, and is transmitted by chigger mites. All travellers should follow food and water precautions, avoid swimming or wading in fresh water, and take measures to prevent insect bites. In addition, any fever or illness after travel should be evaluated by a physician.

Fake and contaminated drugs

It is essential to avoid the temptation to buy over the counter prescription drugs from street pharmacies as there are many fake medicines currently being sold.³⁴ If medication is required then travellers need to attend a reputable clinic or hospital, the name of which can be attained from the travellers' travel health insurance company.

Those wishing to acquire acupuncture therapy or Traditional Chinese Medicines risk non-sterile needles, heavy metal poisoning and contamination with pharmaceutical agents especially steroids and similar compounds. Such practices and products are not advised unless prescribed medically.

Sexually transmitted infections

Rapid economic growth has been paralleled by a sexual revolution that has seen rates of sexually transmitted infections increase dramatically, particularly along the eastern seaboard of China. In the past 20 years, the incidence of syphilis has increased 20-fold and gonorrhoea has been increasing at more than 11% per year. Rates of chlamydia, genital warts, herpes simplex and HIV are also increasing.³⁵ Hepatitis B is carried by at least 10% of the population and is readily transmitted sexually. Travel is associated with loosening of inhibitions, a sense of anonymity and splitting of fixed sexual partnerships. All of these factors increase the likelihood of casual sexual liaison.³⁶ In one study of people attending a travel clinic, 51% of travellers reported casual sex abroad and 38% of the contacts were unprotected.³⁷ A study of Hong Kong travellers to China similarly documented high rates of casual sexual contact, often unprotected and frequently with more than one partner.³⁸ Travellers thus need to be advised about the significant risks associated with unprotected casual sexual relations. Hepatitis B vaccination is advised for those who could be 'at risk'.

Available medical services at games venues

Western style medical facilities with international staffs are available in Beijing, Shanghai, Hong Kong and other large cities. Many other hospitals in major Chinese cities have so-called “VIP wards” (gaogan bingfang). These feature reasonably up-to-date medical technology and physicians who are both knowledgeable and skilled. Most VIP wards also provide medical services to foreigners and may have English-speaking doctors and nurses.⁷ Travellers may be asked to post a deposit prior to admission to cover the expected cost of treatment. Many hospitals in major cities may accept credit cards for payment. Physicians and may refuse to supply travellers with complete copies of their Chinese hospital medical records, including investigative procedures.

Ambulances do not carry sophisticated medical equipment, and ambulance personnel generally have little or no medical training. Therefore, injured or seriously ill travellers should possibly consider taking any available vehicles to the nearest major hospital. In rural areas, only rudimentary medical facilities are generally available. Medical personnel in rural areas are often poorly trained, have little medical equipment or availability to medications. A listing of some medical centres in selected centres in China is given in Table 2.

Accidents and insurance

Accidents and injuries are the leading cause of death among travellers under the age of 55. Most are caused by motor vehicle and motorcycle crashes; and to a lesser degree, drowning, aircraft crashes, murders and burns.

Heart attacks cause most fatalities in older travellers, but infections cause only 1% of fatalities in overseas travellers. Generally, infections are the most common cause of travel-related illness.

Travellers are advised to obtain, before departure, travel health insurance with specific overseas coverage. Any policy should include a 24h access to an assistance centre (that will arrange and monitor delivery of medical care) and a medical evacuation benefit, and travellers need to check for any exclusions that are part of the policy.

To ensure an enjoyable and incident-free experience whilst in China, local advice on personal safety should be obtained from lodge or hotel management, tourism authorities or games management. Finally, it needs be stressed that all travellers should also ensure that they have adequate travel insurance, including aeromedical evacuation contingency plans, discussed elsewhere.³⁹

Conclusions

China has a well-developed tourism industry and a health care system that is expanding to cope with the Beijing Olympic and Paralympic Games events. All travellers, both individual and corporate, to the region are advised to research the region to their own ends as much as possible in order to minimise any untoward situation that could compromise the success of these games.

Table 2 Contact details for medical centres in selected major centres around China

1. Beijing International SOS Clinic. No. 1 North Road, Xing Fu San Cun Chaoyang District, Beijing. Tel.: +86 10 6462 9112 (also has Medical Emergency and Evacuation Service).
2. Beijing United Family Hospital. # 2 Jiang Tai Lu, Chaoyang District, Beijing. 24-Hour Emergency Hotline. Tel.: +86 10 6433 2345 (full service community hospital).
3. Beijing United Family Clinic—Shunyi. Pinnacle Plaza, Unit #818, Tian Zhu Zone, Shunyi District, Beijing 101312. Tel.: +86 10 8046 5432.
4. Beijing United Family Health & Wellness Center—Jianguomen. #21 Jianguomenwai Dajie, B1, The St. Regis Residence, St. Regis Hotel, Beijing. Tel.: +86 10 8532 1221.
5. VISTA Clinic. Kerry Center Shopping Mall B29/B30, 1 Guanghua Road, Chao Yang District, Beijing. Tel.: +86 10 8529 6618.
6. Bayley and Jackson Medical Center. 7 Ritan Dong Lu, Chaoyang District, Beijing. Tel.: +86 10 8562 9998.
7. International Medical Center (IMC). Lufthansa Center Offices, Suite 106, 50 Liang Ma Qiao Rd, Chao Yang District, Beijing. Tel.: +86 10 6465 1561/2/3.

Selected medical centers in Shanghai:

1. Shanghai United Family Hospital. #1139 Xian Xia Lu, Changning District, Shanghai. Tel.: +86 21 5133 1999.
2. Shanghai United Family Clinics—Minhang. Shanghai Racquet Club, Ground Floor, Clubhouse, 555 Jin Feng Road, Shanghai. Tel.: +86 21 2201 0995.
3. Global Health Care. Room 301 Shanghai Kerry Centre, 1515 Nanjing Road West, Shanghai. Tel.: +86 21 5298 6339.
4. Worldlink Shanghai Medical Centre, Shanghai Centre, Suite 203 West Retail Plaza, 1376 Nanjing Xi Lu, Shanghai, Tel.: +8621 6445 5999.
5. Shanghai East International Medical Center. 551 South Pudong Road, Shanghai. Tel.: +86 21 5879 9999.

Medical centers outside of Beijing, Shanghai and Hong Kong:

1. Global Doctor maintains clinics in Shenyang (Liaoning Province), Changsha (Hunan Province), Chengdu (Sichuan Province), Chongqing, Guangzhou (Guangdong Province) and Dongguan (Guangdong Province). Contact details can be found at <http://globaldoctor.com.au/clinics.php>
2. SOS International maintains clinics in Nanjing (Jiangsu Province), Tianjin and Shenzhen. Contact details can be found at http://www.internationalsos.com/en/asiapacificregion_china.htm

*The authors are not endorsing the quality of these centres and it is recommended that advice be sought by the traveller from their travel insurer in the first instance.

Disclaimer

The authors do not necessarily represent the views of the Beijing Olympic and Paralympic Games Organizing Committees or of any other agency connected with the Beijing Olympic and Paralympic Games.

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